

**THE US ARMY
TRANSPORTATION
SCHOOL
APPRENTICESHIP
PROGRAM FOR
THE TRADE OF
SHEET METAL
WORKER
(AIRCRAFT)**

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SUMMARY of CHANGE

DA PAM 621-60

THE US ARMY TRANSPORTATION SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF SHEET
METAL WORKER (AIRCRAFT)

THE US ARMY TRANSPORTATION SCHOOL APPRENTICESHIP PROGRAM FOR THE TRADE OF SHEET METAL WORKER (AIRCRAFT)

By Order of the Secretary of the Army:

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General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

History. This publication has been organized to make it compatible with the Army electronic publishing database. No content has been changed.

Summary. The purpose of this pamphlet is to announce the US Army Transportation School Apprenticeship Program for the Trade of Sheet Metal Worker (Aircraft) (DOT Code 804.281-010).

Applicability. This pamphlet applies to all element of the active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

Proponent and exception authority. The proponent agency of this regulation is the Office of The Adjutant General's Office.

Interim changes. Interim changes are not official unless they are authenticated by The Adjutant General. Users will destroy interim changes on their expiration dates unless sooner superseded or rescinded.

Suggested Improvements. Users are invited to send comments and suggested improvements on DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to Commandant, US Army Transportation School, ATTN: ATSP-ET-IAP, Fort Eustis, VA 23604.

Distribution. To be distributed in accordance with DA Form 12-9A requirements for DA Pamphlets, Education plus 5 copies each to All Education Centers and Sub-centers.

Active Army: B
ARNG: None
USAR: None

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*This pamphlet supersedes DA Pam 621-60, 20 February 1978.

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1. Purpose

The purpose of this pamphlet is to announce the US Army Transportation School Apprenticeship Program for the Trade of Sheet Metal Worker (Aircraft) (DOT Code 804.281-010).

2. Applicability.

This pamphlet applies to all elements of the active Army. This pamphlet does not apply to Army National Guard and Army Reserve.

3. General.

Policies and procedures for participation in the program are contained in AR 621-5. This pamphlet is designed to be used in conjunction with that regulation.

4. Apprenticeship Program Number and Occupational Skill Code.

a. The following apprenticeship program number and occupational skill code are used to identify the US Army Transportation School Apprenticeship Program for the Trade of Sheet Metal Worker (Aircraft).

(1) Apprenticeship Program Number: 99903

(2) Occupational Skill Code: 01

b. the apprenticeship program number and occupational skill code must be entered on DA Form 4409-R (Apprenticeship Application) to identify the program for which the soldier is making application.

5. Eligibility for Participation in the Program.

Soldiers holding as primary or secondary the MOS of 68G (Airframe Repairer) and serving in the MOS may participate in the program.

6. The Sheet Metal Worker (Aircraft) Apprenticeship Program.

This is a 6,000-hour program which leads to certification as journeyworker in the trade of Sheet Metal Worker (Aircraft). Participation in the program is voluntary, and no membership in labor unions or professional associations is required. The work process schedule and schedule of related instruction for the trade are attached (app A and B). The purposes of the work process schedule and the schedule of related instruction are as indicated below:

a. The work process schedule reflects categories of work experience required by soldier-apprentices to qualify as journeyworker and hours of work experience required in each category.

b. The schedule of related instruction identifies courses which may be taken by soldier-apprentices to satisfy the 432 hours of related instruction required for completion of the program.

7. Enrollment in the Program.

Soldiers may enroll in the program by contacting their installation education services officers (ESOs) who will explain requirements of the program and assist in the preparation of the apprenticeship application form (DA Form 4409-R).

8. Apprentice Log Forms.

Apprentice log forms and instructions on use of forms will be issued to soldiers by installation ESOs at the time of registration in the program. Log instruction sheets will be maintained by soldiers in a three-ring binder. Soldier-apprentices will be required to annotate their work experience on log sheets on a daily basis. The standard for the amount of work experience logged will be 132 hours per month. Hours logged above this standard amount must be justified in the remarks section of the daily work experience record and attested to by the signature and rank of the shop craft supervisor or an individual holding a comparable position. Log entries must be verified by the soldier-apprentice's immediate supervisor on a weekly basis.

9. Credit for Previous Experience.

a. Newly enrolled soldier-apprentices who have partially completed an approved Federal or State registered civilian apprenticeship in the trade of Sheet Metal Worker (Aircraft) or a related trade will, upon presentation of documentation, be awarded credit for all experience related to categories of work process schedule at appendix A.

b. Up to 3,000 hours of credit for previous military work experience may be awarded upon presentation of authenticated documentation of satisfactory performance. Such experience must be directly related to the occupation in which the apprenticeship is being performed. Statements from previous supervisors or other such documentation which certify category of work, number of hours by category, and quality of performance will be submitted by soldier-apprentices to their installation ESOs for consideration. ESOs will forward these documents to the Commandant, US Army Transportation School, ATTN: ATSP-ET-IAP, Fort Eustis, VA 23604, for final determination.

10. Related Instruction Credit for Previous Military and Civilian Education.

Credit for previous military and civilian education may be awarded to satisfy related instruction requirements by presenting certificates of course completion or other such documentation from official military records or other sources.

The installation ESO will determine the amount of credit to be awarded. The ESO will consult sponsor Service schools, as required, to determine the appropriate amount of credit for each course not listed in appendix B of this pamphlet.

11. Completion of the Program.

Upon successful completion of the program, a Certificate of Completion of Apprenticeship will be awarded by the US Department of Labor. While the award of a Certificate of Completion of Apprenticeship will not guarantee a job, it will certify that journeyworker status has been attained, and should enable completers of the program to be more competitive with civilians in the trade.

12. Partial Completers.

Soldiers leaving the service prior to completion of the program will receive documented credit for that portion of the program which they did complete. This documentation may be presented for satisfaction of requirements of civilian apprenticeship programs in the trade of Sheet Metal Worker (Aircraft) or a related trade. (See app C)

Appendix A

WORK PROCESS SCHEDULE SHEET METAL WORKER (AIRCRAFT)

Hours

A. PLASTICS, FIBERGLASS AND HONEYCOMB1,000

1. Repair sandwich constructed honeycomb structural sections.
2. Repair thermosetting (reinforced fiberglass) plastic items.
3. Perform lacing repair, machine screw repair, contoured overlaying repair, machine screw patch repair, and capillary repair to transparent plastics.
4. Perform transparent plastic plug repair.
5. Install transparent plastic enclosures.
6. Repair fiberglass covered, honeycomb structured rotor blades.

B. PAINTING 500

1. Apply touch-up painting to aircraft structures.
2. Construct/paint aircraft markings (letters/ numbers/ insignias) for identification.
3. Paint aircraft assemblies/components.

C. RIVETING AND SPECIAL FASTENERS2,000

1. Remove universal and countersunk head rivets.
2. Install universal head rivets on aircraft utilizing the hand method, pneumatic method and squeeze method.
3. Install countersunk head rivets on aircraft utilizing the hand and pneumatic method.
4. Remove and install friction and mechanical rivets.
5. Remove and install hi-shear and hi-lock rivets.
6. Remove and install hi-lock fasteners.
7. Remove pull/blind type lock bolts.
8. Install pull type lock bolts.
9. Install blind type lock bolts.
10. Remove and install jo-bolts.
11. Replace hi-shear rivets with aircraft hardware.
12. Remove and install damaged nut plates.
13. Remove and install dzus fasteners.
14. Remove and install camlog fasteners.
15. Remove and install rivnuts.

D. STRUCTURAL REPAIR2,000

1. Make flat pattern layout of parts for repair.
2. Fabricate structural parts.
3. Repair spot weld failures by riveting.
4. Repair skin stress by lap/scab patch method.
5. Layout rivet patterns for structural repair.
6. Repair dents/buckles by installing doublers/stiffeners.
7. Apply flush patch clear of internal structures.
8. Apply flush patch over internal structures.
9. Replace stress skin panel
10. Repair spars/beams.
11. Repair ribs.
12. Repair formers/bulkheads.
13. Apply a flush repair to chem milled skin.

E. MISCELLANEOUS REPAIRS 500

- 1. Remove/treat corrosion of aircraft structures.
- 2. Remove, repair and install deicer boots.
- 3. Anneal aluminum alloys to remove heat treatment or strain hardening.
- 4. Heat-treat fabricated aluminum (annealed repair parts).

TOTAL 6,000

Appendix B

SCHEDULE OF RELATED INSTRUCTION FOR TRADE OF AIRCRAFT SHEETMETAL WORKER (DOT CODE 804.281-010)

A total of 432 hours of related instruction is required to complete this program. Credit for courses not listed below may be awarded upon presentation of authenticated documentation of satisfactory completion. A synopsis of the course must be submitted with documentation. Documentation and synopsis of courses not listed below will be forwarded by ESOs to Commandant, US Army Transportation School, ATTN: ATSP-ET-IAP, Fort Eustis, Virginia 23604, for final determination.

Table B-1
SCHEDULE OF RELATED INSTRUCTION FOR TRADE OF AIRCRAFT SHEETMETAL WORKER^c

Course Number	Course Title	School	Resident	Non-Resident	Hours Credit
A 603-68G10	Airframe Repair	USATS	X		326 ^{a, b}
B 603-68G20	Airframe Repair	USATS	X		370 ^{a, b}
C TRO 444	Blueprint Reading and Sketching	USATS		X	7
D TRO 821	Aviation Maintenance Inspection System	USATS		X	6
E TRO 822	Aviation Maintenance and Supply Forms and Publications	USATS		X	9
F TRO 824	Aviation Ground Support Equipment	USATS		X	2
G TRO 904	Safetying Procedures	USATS		X	3
H TRO 907	Basic Hydraulics and Hydraulic Plumbing	USATS		X	4
I TRO 909	Army Aircraft Weight and Balance	USATS		X	3
J TRO 917	Nondestructive Testing	USATS		X	2
K TRO 926	Hydraulic Systems and Components	USATS		X	4
L TRO 929	Aircraft Instruments	USATS		X	8
M TRO 967	Corrosion Control	USATS		X	3
N TRO 968	Aircraft Technical Drawings	USATS		X	7
O TRO 970	Aircraft Common Hardware	USATS		X	3
P TRO 973	Aircraft Forms and Records	USATS		X	7
Q TRO 992	Airframe Repair	USATS		X	7
R TRO 995	Rotor Blades	USATS		X	3
S TRO 996	Aircraft Electrical Power Supply System	USATS		X	9
T AVO 047	Introduction to Metric System	USAAVNS		X	3
U AVO 570	Aviation Shop and Flight Line Safety	USAAVNS		X	2
V AVO 573	Aircraft Structures	USAAVNS		X	4
W ODO 425	Welding	USAOCS		X	16
X QMO 113	Basic Mathematics	USAQMS		X	3
Y QMO 114	Basic Mathematics II	USAQMS		X	3
Z QMO 115	Basic Mathematics III	USAQMS		X	4
AA QMO 116	Basic Mathematics IV	USAQMS		X	1
BB CDC 53151	Metals Processing Spec	USAF		X	87

Table B-1
SCHEDULE OF RELATED INSTRUCTION FOR TRADE OF AIRCRAFT SHEETMETAL WORKER^c—Continued

Course Number	Course Title	School	Resident	Non-Resident	Hours Credit
CC CDC 53153	Airframe Repair Spec	USAF		X	177
DD CDC 53154	Corrosion Control Spec	USAF		X	63
EE CDC 53155	Nondestructive Inspect Spec	USAF		X	105
FF NAVEDTRA 91288-2A	Tools and Their Uses	USN		X	36
GG NAVEDTRA 91365-1B	Aviation Structural Mech	USN		X	60

Notes:

^a Persons who successfully complete the 68G10 Aircraft Sheetmetal Worker Course presented at the US Army Transportation School shall be considered to have met 326 of the 432 hours of related instruction necessary for this program. Graduates of this course will be required to take an additional 106 hours of related instruction. This requirement may be met by completing courses letter GC above and any combination of courses listed that are not duplication of resident course subjects. Courses considered duplication are: D, M, N, P, Q, R, U and V.

^b Persons who have successfully completed the 68G20 Aircraft Sheetmetal Worker Course presented at the US Army Transportation School shall be considered to have met 370 of the 432 hours of related instruction necessary for this program. Graduates of this course will be required to take an additional 62 hours of related instruction. This requirement can be met by completing any combination of the courses listed in appendix B that are not duplication of resident course subjects. Courses considered duplication are: D, M, N, P, Q, R, U, and V.

^c Persons who have not completed one of the resident courses above may meet the related instruction requirement necessary for completion of this program by taking courses listed under C, D, H, I, J, K, N, Q, R, S, W, X, Y, Z, AA, CC, DD and any combination of remaining correspondence courses listed that will total 432 hours.

Appendix C
EXAMPLE OF A PARTIAL COMPLETION LETTER

(Enter Office Symbol)

(Enter Date)

TO WHOM IT MAY CONCERN:

This is to certify that _____ was enrolled in the Army
(Name)

Apprenticeship Program for _____
(Name of Occupational Skill Area)

_____ during the period _____ to _____.
(Registration Number) (Date) (Date)

During that period he successfully completed the following hours:

<i>Work process</i>	<i>Hours</i>
A	—
B	—
—	—
—	—

Army Apprentice Programs are registered with the US Department of Labor and the fact that this individual did participate can be verified with the Bureau of Apprenticeship and Training, Patrick Henry Building, Washington, DC 20213, or by contacting Headquarters, TRADOC, ATTN: ATPL-AGE, Fort Monroe, VA, 23651.

Sincerely,

ESO's SIGNATURE BLOCK

Figure C. Example of a Partial Completion Letter

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